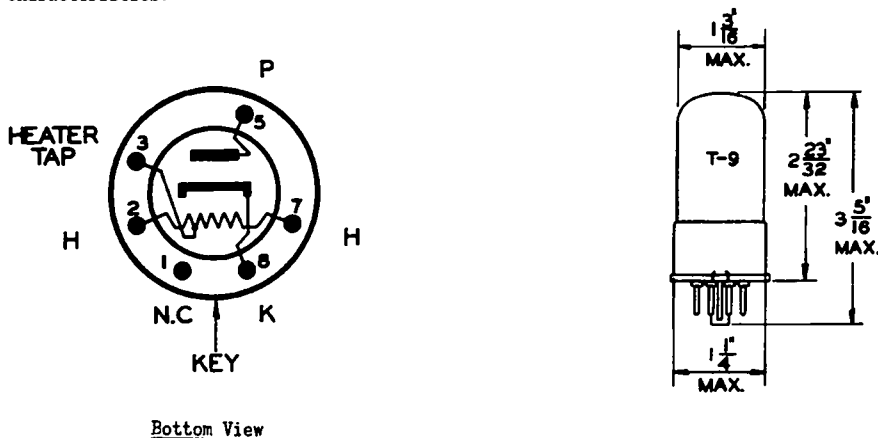


GENERAL DESCRIPTION

Application: The Ken-Rad 35Z5GT is a cathode type half-wave rectifier designed for service in AC-DC receivers. It features a 35 volt 150 milliamper heater having a tap brought out from the heater so that with proper external connections a single pilot lamp can be lighted to nominal brilliancy. It is recommended that the plate current of the rectifier be passed through the pilot lamp and the tapped section of the heater. This is accomplished by connecting the plate of the rectifier to the tap on the heater. The Ken-Rad 35Z5GT is a glass tube equipped with an octal base.

Physical Characteristics:RATING AND CHARACTERISTICS**Heater:**

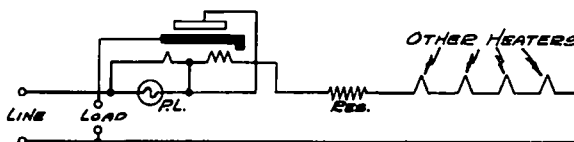
Voltage	35.0	Volts AC or DC
Current	.150	Ampere

Note: With 35 volts RMS between pins 2 and 7, the open circuit voltage between pins 2 and 3 is 7.5 volts RMS.

*** MAXIMUM CONDITIONS**

AC Plate Voltage (RMS)	125	Volts	Max.
DC Load Current with No. 40 or No. 40A Pilot Lamp	50	Milliamperes	Max.
DC Load Current with No. 50 or No. 51 Pilot Lamp	60	Milliamperes	Max.
DC Load Current without Tap Connected	100	Milliamperes	Max.
Average Tube Voltage Drop	16	Volts at 200 Milliamperes	

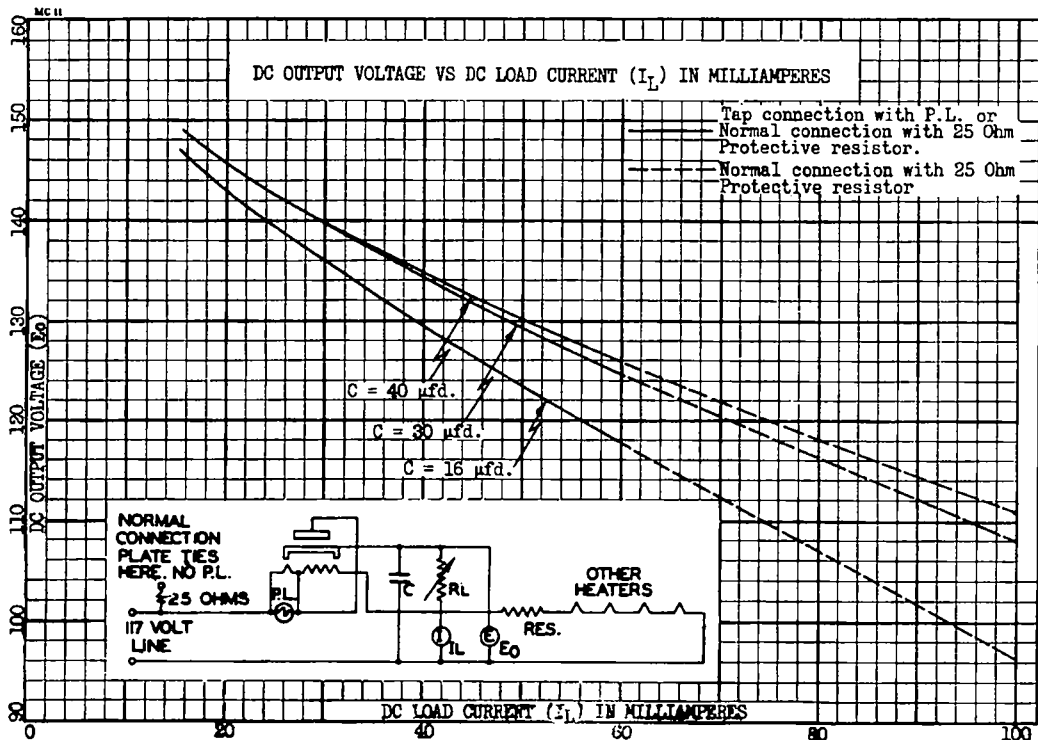
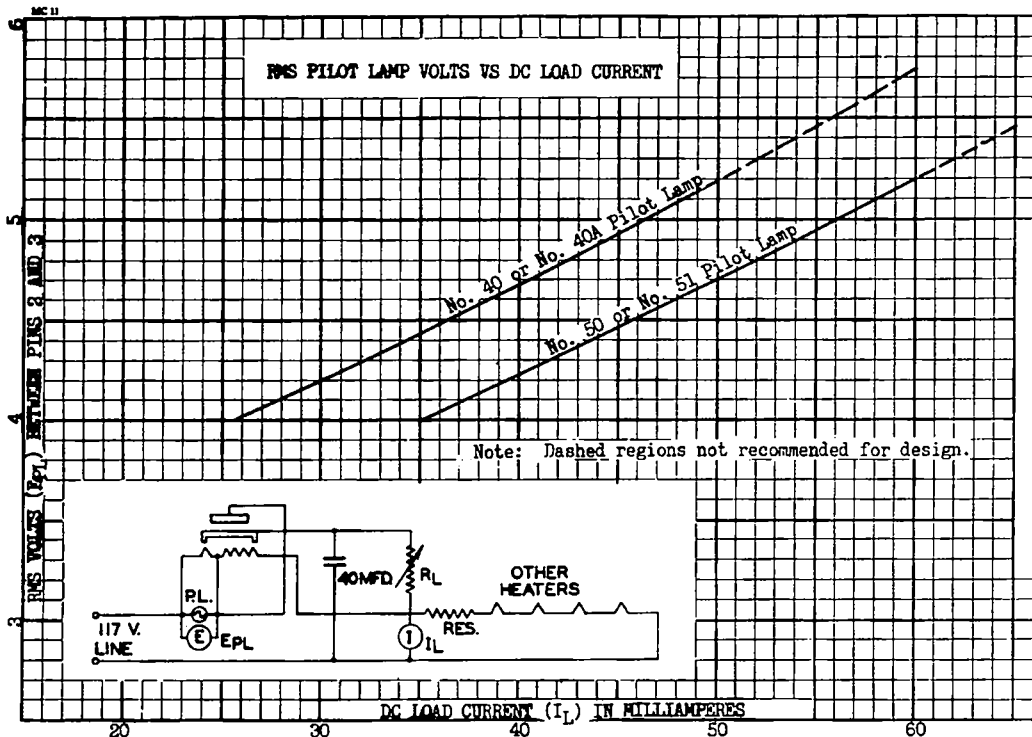
* The ratings marked maximum are design centers for a line voltage of 117 volts.
 Note: No. 40 and No. 40A lamps are .15 Amp. at 6.3 Volts.
 No. 50 and No. 51 lamps are .20 Amp. at 7.5 Volts.

TYPICAL CONDITIONS-TAP CONNECTION

Note: Drop across resistance and all heaters should total 117 volts at .150 Amp.

RECOMMENDATIONS

1. It is recommended that the pilot lamp and DC load current should be such that the potential between base pins 2 and 3 does not exceed 5.2 volts RMS at 117 volts line. This voltage should be measured with a thermal meter or a meter that will read RMS voltages. Rectifier type voltmeters, although calibrated in RMS volts, measure average volts and should not be used for this measurement.
2. It is recommended that the input filter condenser be limited to 40 microfarads.
3. Although it is possible to use DC load currents above 60 milliamperes in combination with high current pilot lamps such as the No. 44 and No. 46, this operation is not recommended because with pilot lamp failure excessive voltage appears between pins 2 and 3 causing heater burn out.
4. If the 35Z5GT is used without the tap connection it is recommended that a 25 ohm protective resistor be used in series with the plate.
5. Voltages should not be applied to the socket when installing or removing tubes.



JETEC DATA
JOINT ELECTRON TUBE ENGINEERING COUNCIL
COMMITTEE ON RECEIVING TUBES

JETEC TYPE 35Z5GT

DIODE

MECHANICAL DATA

Coated unipotential cathode		
Outline drawing.	9-11 or 9-41	Bulb. T-9
Base	B6-8	intermediate shell octal 6-pin
	or B6-60	short intermediate shell octal 6-pin
Maximum diameter		1-9/32"
Maximum overall length		3-5/16"
Maximum seated height		2-3/4"
Pin connections.		Basing 6AD
Pin 1 - No connection		Pin 5 - Plate
Pin 2 - Heater		Pin 7 - Heater
*Pin 3 - Heater tap		Pin 8 - Cathode

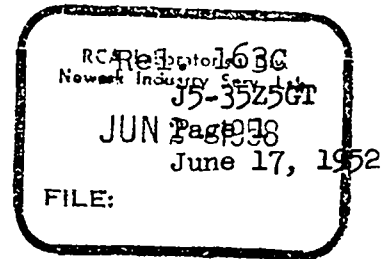
*Panel lamp heater section is between pins 2 and 3.

Mounting position. any

ELECTRICAL DATA

<u>Ratings</u>	<u>Without Panel Lamp</u>	<u>With No. 40 or No. 47 Panel Lamp</u>
Heater voltage (ac or dc)		
Entire heater (pins 2 and 7)	35	35 volts
Panel lamp section (pins 2 and 3).	7.5	5.5 volts
Heater current		
Between pins 2 and 7	150	- ma
Between pins 3 and 7	-	150 ma
Maximum AC plate voltage (r.m.s.)	235	volts
Maximum peak inverse voltage	700	volts
Maximum steady state peak plate current.	600	ma
Maximum DC heater-cathode voltage.	350	volts
Maximum panel lamp section r.m.s. voltage when panel lamp fails.	15	volts
Maximum steady-state DC output current:		
With panel lamp and no shunting resistor	60	ma
With panel lamp and shunting resistor.	90	ma
Without panel lamp	100	ma
Maximum value of panel lamp shunting resistor:		
For DC output current of 70 ma	800	ohms
For DC output current of 80 ma	400	ohms
For DC output current of 90 ma	250	ohms
Tube voltage drop with tube conducting 200 ma DC plate current	.18	volts

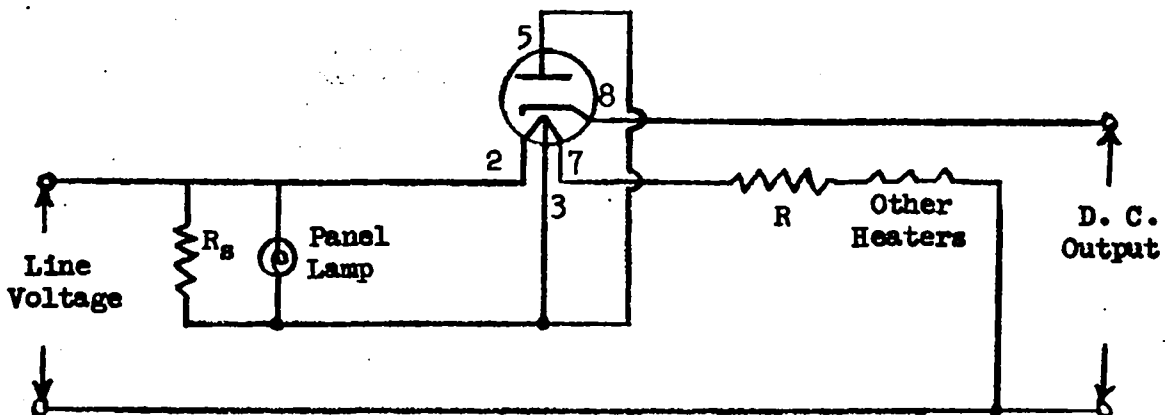
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ELECTRICAL DATA (Continued)

Typical Operation with No. 40 or No. 47 Panel Lamp In Circuit Below with Capacitor Input to Filter

A.C. Plate supply voltage (RMS)	117	117	117	117	235	volts
Filter input capacitor	40	40	40	40	40	μ f
Minimum total effective plate supply impedance	15	15	15	15	100	ohms
Panel lamp shunting resistor	-	300	150	100	-	ohms
D.C. output current.	60	70	80	90	60	ma



Drop across R and all heaters (with panel lamp) should equal the line voltage at 0.15 ampere.
Rs = shunting resistor required when DC output current exceeds 60 milliamperes.

Typical Operation Without Panel Lamp in Conventional Half-wave Circuit With Capacitor Input to Filter: (plate current must not flow through tap section)

A.C. plate supply voltage (RMS)	117	235	volts
Filter input capacitor.	40	40	μ f
Minimum total effective plate supply impedance	15	100	ohms
D.C. output voltage at input to filter (approx.):			
At 50 ma (half load)	140	280	volts
At 100 ma (full load)	120	235	volts
Difference (voltage regulation)	20	45	volts
Percentage regulation.	14	16	%
D.C. output current.	100	100	ma

Refer to "Interpretation of Receiving Tube Ratings"